

Appl. No. 09/488,390  
Amdt. dated November 6, 2004  
Reply to Office Action of July 6, 2004

### REMARKS:

#### *Status of claims:*

The Examiner renewed the rejection of the claims over U.S. Patent No. 6,175,772 to Kamiya et al. Applicants respectfully request reconsideration of these rejections in light of the amendments made to claims 1 and 12 and the arguments presented herein.

Applicants have amended claim 1 to recite that the apparatus is "operable to biometrically identify an imaged one of a plurality of animate or inanimate objects having facial or face-like characteristics by measuring the facial or face-like characteristics of the imaged object." The specification provides ample support for this amendment. See, e.g., page 19, lines 12-19 (facial images are projected as a point in face-space, and verification of a human user is provided by measuring the Euclidian distance between points in the face space).

Applicants have also amended claims 1 and 12 to clarify that the type of recognition being employed is *biometric* recognition, which is distinct from mere *facial expression* recognition. See Oxford Advanced Learner's Dictionary (defining "biometric" as "using measurements of human features, such as fingers or eyes, in order to identify people").

#### *Prior-art based rejections of claims*

The Examiner again rejected claims 1-2, 8-10, and 11-15 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,772 to Kamiya et al. The Examiner stated that "Kamiya discloses an acquisition device to acquire a representation of a facial characteristic of an object ... wherein the user ... is imaged and the image is used to recognize the facial expression 'facial recognition' as claimed."

As amended, all of the independent claims now recite that the type of recognition being employed is *biometric* recognition. This is distinguishable from mere *facial expression* recognition. Kamiya neither teaches nor enables *biometric* identification. Rather, Kamiya et al. discloses a toy that recognizes *a very limited number of facial expressions*. In particular, Kamiya's system recognizes only seven basic emotional models – neutral, disgusted, happy, sad, surprised, angry, and fearful. Col. 6, lines 32-35; col. 7, lines 37-40. This is a far less complicated process than *biometric* identification.

Because Kamiya et al does not, individually or in combination with the other references, teach or suggest all of the claimed limitations, Applicants respectfully request withdrawal of the rejections. See MPEP § 2143.03 ("All Claim Limitations Must Be Taught or Suggested").

Applicants respectfully urge the Examiner to view an online four-minute demonstration of their facial-image-recognition toy at <http://www.cernyar.com/toy.mpg>.

Appl. No. 09/488,390  
Amdt. dated November 6, 2004  
Reply to Office Action of July 6, 2004

Applicants' ability to commercialize the invention demonstrated in this video hinges on the Patent and Trademark Office rewarding their efforts with a patent. Applicants cannot afford to compete with industry giants without protection for their idea.

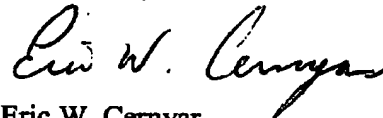
Applicants have provided the Patent and Trademark Office with a detailed disclosure of their invention. It is the first patent application to articulate the concept of using biometric facial recognition in a toy for providing entertaining interaction. And it goes far beyond describing concepts. It teaches persons of ordinary skill in the art how to make and use the invention, breaking down the problem into the following discrete steps: (1) face finding, (2) feature extraction, (3) determination of the existence within the acquired data of human or human-like facial images, (4) scaling, rotation, translation, and pre-masking of the captured facial image data; and (5) contrast normalization and final masking. See page 22, line 15 – page 29, line 9.

### Conclusion

Believing that all things raised in the Examiner's July 6, 2004, Office Action have been addressed, the undersigned respectfully requests that the application be allowed and passed to issue.

As set forth in the accompanying petition for extension of time, the Commissioner, is authorized to deduct any fees that may be required from Eric W. Cernyar, P.C.'s deposit account no. 502906.

Respectfully submitted,



Eric W. Cernyar  
Reg. No. 45,919  
(210) 863-0063